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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,509	01/12/2001	Werner Knebel	293.000410	2458

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SIMPSON & SIMPSON, PLLC
5555 MAIN STREET
WILLIAMSVILLE, NY 14221-5406

EXAMINER	
NGUYEN, THONG Q	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/759,509	KNEBEL, WERNER	
	Examiner	Art Unit	
	Thong Q. Nguyen	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2003 and 18 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-43* is/are pending in the application.

4a) Of the above claim(s) *12-28* is/are withdrawn from consideration.

5)☒ Claim(s) *29-32,39-41 and 43* is/are allowed.

6)☒ Claim(s) *1,3-11,33 and 42* is/are rejected.

7)☒ Claim(s) *34-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/14/2003 has been entered.

Election/Restrictions

2. The present application was subjected to a restriction requirement (see Paper No. 7 of 4/30/02), and the invention elected by applicant in the Election (Paper No. 8 of 6/7/02) has been examined (see Office actions, Paper Nos. 9 and 15).

In response to the Office actions (Paper No. 15 of 5/20/03 and Paper No. 17 of 8/7/03), applicant has refiled the application under Rule 37 CFR 1.114 on 8/14/2003. Since the application is refiled under the Rule 37 CFR 1.114; therefore, the invention to be examined has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1, 3-11, and 29-43 are examined in this Office action, and claims 12-28 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Double Patenting

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to

identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claim 33/29 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 29. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 42 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In particular, the claim and its base claim 29 do not provide a proper antecedent basis for the feature "the scanning device' recited on line 3 of claim 42.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 3-4 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Haydon (U.S. Patent No. 5,874,726).

Haydon discloses an apparatus for observing optical microscopic images of an object subjected to treatment/include fluorescent agent. The system as described

in columns 5-6, and 8-11 and shown in figure 1 comprises a laser source (104) for providing light to a specimen (100) having a top surface facing the light source and a bottom surface facing away from light source; a scanning system (110) for scanning the light on the object; at least one fluorescent detectors (134 and 138) disposed on the bottom side of the object for detecting fluorescent light generated by the object; and at least one transmitted light detector (124) disposed on the same side as those of fluorescent detectors for detecting transmitted light wherein the light detected by the transmitted light detector (124) is not produced by the fluorescence of the object. See column 6, lines 22-44, for example. Regard to the feature relating to the condenser lens without any specific features/limitations for the optical characteristics of the condenser lens as recited in present claim 4, the system of Haydon comprises a lens (114) which is considered as a lens having the function as a condenser lens for the system.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haydon in view of Ichie (U.S. Patent No. 5,796,112, of record).

The apparatus provided by Haydon does not explicitly disclose the use of a detector for detecting both the fluorescent light and the transmitted light. However, such use of a single detector for detecting both the fluorescent light and transmitted light as claimed is merely that of a preferred embodiment and no

criticality has been disclosed. The support for that conclusion is found in the present application. It is also noted that the use of different detectors for detecting separately fluorescent light and transmitted light is indeed claimed as can be seen in present claim 10, for example. Further, the use of a single detector in the form of a multiband detector for detecting different detected lights is known to one skilled in the art as can be seen in the microscope provided by Ichie. See the embodiment described in columns 13-14 and shown in figures 7-8. Thus, absent any showing of criticality, it would have been obvious to one skilled in the art at the time the invention was made to utilize a single detector in the form of a multiband detector as suggested by Ichie for the purpose of detecting a plurality of detected light so that a compact system is obtained.

11. Claims 1, 3-4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichie (U.S. Patent No. 5,796,112, of record) in view of Haydon (U.S. Patent No. 5,874,726).

Ichie discloses a laser scanning microscope having an illuminating system and detecting systems for detecting fluorescent light from a sample. The microscope as described in columns 14-16 and shown in fig. 10, for example, comprises a laser light source (1) for providing light to a sample (15) containing fluorescent agent wherein the sample has a top side facing to an objective lens system (14) and a bottom side facing to a condenser lens system (17), a scanning system (12) for scanning the light from the laser in two directions on the sample; a set of dichroic beam-splitters (31b and 31c), a set of detecting devices (19a-19c) wherein the detecting devices (19b-19c) receive

fluorescent light reflected from the beam-splitters and the detecting device (19a) receives light transmitted through the beam-splitters. It is noted that 1) the light received by the detecting devices (19a-19c) are the light pass through the sample (15); 2) the detecting device can be a multiband detecting device. See column 14 and fig. 8; and 3) the beam-splitters and the detecting devices are disposed on the same side with the condenser lens system. Regard to the use of a single detecting device for receiving both fluorescent light and transmitted light passing through the sample. It is noted that in the embodiment as described in columns 8-9 and shown in fig. 1, Ichie discloses the use of a single detecting device (19a) on the same side with the condenser lens system (17) for receiving the fluorescent and transmitted light. The only feature missing from the microscope provided by Ichie is that it does not explicitly disclose the use of one of the detecting devices for receiving the light transmitted from the sample wherein the light is not produced by the fluorescence of the sample.

However, the use of a plurality of detectors in a microscope wherein one of the detector is used to receive light from a fluorescent sample wherein the light is not produced by the fluorescence of the sample is known to one skilled in the art as can be seen in the detecting system used in a microscope provided by Haydon. In particular, Haydon discloses an apparatus for observing optical microscopic images of an object subjected to treatment/include fluorescent agent. The system as described in columns 5-6, and 8-11 and shown in figure 1 comprises a laser source (104) for providing light to a specimen (100) having a top surface facing the light source and a bottom surface facing away from light source; a scanning system (110) for scanning the light on the

object; at least one fluorescent detectors (134 and 138) disposed on the bottom side of the object for detecting fluorescent light generated by the object; and at least one transmitted light detector (124) disposed on the same side as those of fluorescent detectors for detecting transmitted light wherein the light detected by the transmitted light detector (124) is not produced by the fluorescence of the object. See column 6, lines 22-44. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Ichie by using one detector of the plural detectors for detecting/receiving transmitted light which does not contain the fluorescent wavelengths as suggested by Weber for the purpose of adjustment the operation of the light source.

12. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichie in view of Haydon as applied to claim 4 above, and further in view of Kapitza (DE 37 42 806) (of record).

The laser scanning microscope provided by Ichie and Haydon meets all of the limitations recited in the pending claims 5-8 except the feature concerning the comparison between the apertures of the objective lens system and the condenser lens system. However, a scanning microscope having an illuminating system and a detecting system wherein the aperture of the condenser lens system is larger than the aperture of the objective lens system is clearly suggested to one skilled in the art as can be seen in the laser scanning microscope for detecting fluorescent sample provided by Kapitza. See columns 3-4 and fig. 2. Thus, it would have been obvious to one skilled in the art at the

time the invention was made to modify the laser scanning microscope provided by Ichie and Haydon by using a condenser lens system having an aperture larger than the aperture of the objective lens system as suggested by Kapitza for the purpose of improving the collection of the fluorescent detected light to the detecting devices.

Response to Arguments

13. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

14. Claims 29-32, 39-41 and 43 are allowed over the cited art.

15. Claim 42 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

16. Claims 34-38 would be allowable if claim 34 is rewritten or amended to depend upon claim 29. Applicant should note that the claim 33 is subjected to an objection under 37 CFR 1.75 as set forth in this Office action.

Conclusion

17. The additional references are cited as of interest in that each discloses the use of plural detectors in a microscope. In particular, the U.S. Patent No. 4,893,008 discloses the use of a fluorescent detector and a transmitted detector.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (703) 308-4814. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

Thong Q. Nguyen
Primary Examiner
Art Unit 2872

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